



**Super Media World**  
**An Archaeology of Convergence and Exchange**  
**between**  
**Physical and Digital Spaces**

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for the degree of  
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## **ABSTRACT**

Super Media World has been an exploration of the spaces that exist around, within, and between screen technologies. Investigating the physical locations inhabited by screen and viewer, illusory time-spaces constructed by the spectacles of cinema and TV, and the online site-spaces created by digital media, I have collected and produced imagery, footage, and objects from these spaces, using them to create artworks that explore potential interactions and points of convergence between these realms.

With reference to modes of collection, manipulation, archiving, and reproduction, this project has examined the flexible, convergent nature of screen spaces past and present. Following a method of production based on the media archaeologies of Erkki Huhtamo and Jussi Parikka, I researched the layers of technological history that have shaped the current media environment, at once identifying, expanding, and augmenting these strata through my intervention. This central process became a way of tracing, crafting, and subverting moments of intersection between physical and digital spaces of the screen, generating new layers, new archaeologies.

With reference to the philosophies and practices of Walter Benjamin, Michel Foucault, and Soda\_Jerk, amongst others, this project has considered the fluidity of spaces, reflecting on the relationship between advances in techniques of viewing and fluctuations in perception. With an awareness that any concept of the relationship between spaces is in a state of constant flux, the aim, and outcome, of this project has been to mediate, recreate, and reflect on the potential alteration of visible spaces through artistic intervention using screen-based media.

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## INTRODUCTION

*'...it is no longer enough to say... that media add something to our environments. For now the very idea of environment has changed.'*

(Crocker 2007, p. 52)

At the same time as writing this sentence I am sitting on my back door step. Looking down at the computer sitting on my lap I make some more marks by tapping the buttons of the keyboard. Then I look up and out at my garden. I see a bee drifting from yellow flower to yellow flower; I can hear the buzzing of its wings. Returning to the computer to record my thoughts I can still feel the light warm breeze and hear the peeping of that sparrow, all at once. The portability of the laptop allows me to move with it through the environment I inhabit, and experience them both, not just one after the other, but simultaneously.

This research project investigates the simultaneous experience of physical and digital spaces as facilitated by screen technologies. After an initial focus on exploring visual media as tools for recording and interacting with the world and the people around us, the project examines past and present integrations between virtual spaces and real world locations in an attempt to uncover the processes that have shaped the current media environment. Utilising technologies, images, and footage from varied and specific historical points the visual work produced in this project questions the materiality, temporality, and solidity of the spaces we inhabit and seeks to understand the origins of real world and virtual space amalgamations.

Pondering the increasingly familiar experience of space with technology, Finnish media theorist Erkki Huhtamo asks:

How often do users of smart phones think about the curious shifts in perception between nothing less than ontological realms that take place when they move their gaze from the screen to other humans, to the surrounding landscape, to another screen, and back again...? (Huhtamo 2012, p. 144)

In this project I explore these continuous exchanges and convergences between screen technologies, spaces and myself, investigating how an experience of a space can be altered by the presence of the machines designed to shape, augment, and expand those interactions. I have incorporated into my research media and technologies from both contemporary times and previous decades. At separate stages in the project this has allowed me to position my work in different points of media history, encompassing current, past, and deeper times of media and space.

I consider screen space through Foucault's analogy of the mirror, a space through which we can experience '...an oscillation between the interior and the exterior...' (Foucault 1970, p. 11) as we conduct exchanges with the physical location where the screen is situated and the visual space that the screen contains. Using Foucault's notion that space '...takes for us the form of relations among sites...' (1984, p. 2) I position my research at the points where in-between media spaces make contact with physical locations. I explore the screen as a device that can create correspondences among Foucault's spaces '...of the simultaneous, of juxtaposition, the near and the far, the side by side and the scattered...' (Foucault 1997, p. 350), focussing on the correspondences they forge between virtual and physical environments that may otherwise remain separate and distinct.

Media archaeology is a research method that allows a practitioner to travel through the history of media environments, a past that '...only opens up for the active participant, who is ready to leave one's customary chronological order of things...' (Huhtamo 1995) Using this method I trace examples of the interplay between machines and spaces without the restriction of linear ordering, allowing me to consider intersections between spaces and

technologies as a continuous process, rather than a series of succeeding developments. Using Huhtamo's '...way of maintaining dialogue with the technological past...' (1995) I locate specific forms of exchange within art practices past and present. Further into the project I use Jussi Parikka's theories on the geology of media to unearth the oldest relations between screen technology and the physical world.

My earliest explorations of spaces were based on visual interaction, as Chapter 1 details, examining how technology can augment, influence, and limit that process. With a particular focus on camera and satellite technologies this chapter discusses ways virtual spaces can give us access to live real time moments as well as pre-recorded media histories. Progressing into Chapter 2 I introduce more involved approaches to interaction, as I moved from passive onlooker to active participant. The second chapter considers the reflective capacity of the screen, with the ability to locate the viewer within a virtual space and making encounters with people in other locations possible. The final chapter centres around experiments with the materiality of media and screen devices, looking at the deeper history of technology and introducing new modes of exchange between the screen, physical spaces, and myself.

## CHAPTER 1: Mediating Vision

*'What are the implications of simultaneity? Of instant exposure and instant response?'*

(Bear 2009)

When present in a space you experience it without reproduction or filter; it is simply there, simultaneous inhabited and experienced with nothing detected in between. Although my vision is restricted to the contents of the room I currently inhabit I am aware of the space outside, if only because of the plane I can hear flying past. The sound of those propellers is an indication of the world I explored in this project: I no longer experience spaces without the presence of machines.

For the first area of research I focused on exploring the saturation of natural spaces with mediating technologies. Using the internet to find images of different spaces I examined the capacity of machines to provide me with visual access and interaction with real world locations. Initially my process was to find vision of physical spaces through live streaming web camera feeds, found on websites like Earthcam.com and Africam.com. The purpose of these websites is to present the viewer with a range of live video links to locations of their choice. Once a link is selected the viewer is given access to an instant visual connection to a place that exists somewhere else (Figure 1).



Figure 1: Jessica Dorloff, Zwardoń, *Wyciąg Duży Rachowiec* webcamera captured footage, 2014, digital colour video

As I accessed views of different physical locations through web cameras and live stream websites I began to uncover exchanges between real world and virtual spaces. Taking up Janine Marchessault's suggestion that 'All media are the new environment, they are nature...' (Marchessault 2007, p. 35) I found that the direct unedited vision provided by the web cameras created the illusion of inhabiting another place, when in fact the physical location had been replaced by a visually realistic video space.

In *The Work of Art in the Age of Mechanical Reproduction* Walter Benjamin introduces ideas about viewing nature with cameras, an experience that differs from seeing it unmediated. Stating that '...a different nature opens itself to the camera than opens to the naked eye.' (1969, p. 16) Benjamin demonstrates the difference between seeing a space in person and experiencing it through vision provided by a camera, '...if only because an unconsciously penetrated space is substituted for a space consciously explored by man.' (1969, p. 16) The network of webcams I used to watch live images of real places provided me with 24 hour, real time, and seemingly unlimited vision of our planet. The footage was continuous, with no editing breaks and little camera movement. The lack of any obvious human intrusion in the video created a sense of directness, contributing to my feeling that I was being presented with candid, inartificial views of natural spaces. American artist Doug Rickard also explored this false sense of immersion, incorporating images from virtual online spaces into his photographic work.

Doug Rickard played with the process of experiencing physical locations through disembodied and digitised vision in his virtual documentary project *A New American Picture* (2010). While physically located in one space, Rickard used his computer and Google's Street View to virtually explore urban spaces. As he '...took advantage of Google's massive internet archive to virtually explore the roads of America...' (Rickard n.d.) Rickard created exchanges between himself and a series of physical spaces, metaphorically travelling through them using visual data.



Figure 2: Doug Rickard, *A New American Picture*, 2010, digital image

He then altered his interaction with those spaces by using a digital SLR to compose and document the images on his computer screen, lifting them out of their original contexts (see Figure 2). Rickard's level of involvement in the spaces alternated between disembodied viewer and active participant, shifting with each new technology he added to the process.

Rickard's documentary project introduced questions about the supposed authenticity of places viewed through online tools. I referred back to Benjamin, who explained that 'The equipment-free aspect of reality... has become the height of artifice; the sight of immediate reality has become an orchid in the land of technology.' (Benjamin 1969, Pg. 13) While web cameras and Google Street View can generate visual interactions with physical spaces, I was aware that these exchanges are not direct, but take place through the filter of the equipment used to view them. Just because the equipment is not visible in the imagery does not mean it is absent during the exchange. This led me to focus on equipment as a potential mediator of vision, exploring how changes within technologies could alter experiences of the physical environment.

In a series of web camera experiences I viewed the Earth in orbit from two different camera feeds mounted on the International Space Station. Known as

the Live\_ISS\_Stream and the ISS HD Earth Viewing Experiment (HDEV) respectively, the two sets of cameras provided me with real-time, full colour video of the Earth's surface as seen from space. I began by accessing the Live\_ISS\_Stream between 28 August and 1 September 2014. The camera system used in this video feed was older, and had been damaged by the harsh conditions of space. This resulted in grainy, blurry, and washed out images seen through a camera lens obscured by marks (Figure 3). Although the images were still spectacular, I discovered how much the poor condition and lower capabilities of the cameras had been influencing my reading of the video when I switched to the newer HD Earth Viewing Experiment (HDEV) cameras on September 1, 2014.

In contrast to the battered old cameras used in the previous feed, the HDEV cameras offered highly detailed, clear and bright images of the Earth suspended in space. Having been activated on 30 April 2014, the HDEV provided around the clock access to vision of the entire globe as seen from the outside, a position described by astronauts as the overview (Figure 4). Although the older cameras also provided this view, the improvement in picture quality by the HDEV increased the illusion of seeing direct, unfiltered vision of a real location.

The change in cameras with better definition on the ISS changed the way I experienced the space. As Will Stefanov, the Associate ISS Program Scientist for Earth Observations states: 'It's a new view of the Earth... the HD camera is capturing it in real time... it is really like you're on the ISS looking out the window.' (NASA Johnson, 2014) As I explored NASA's HD Earth viewing experiment witnessing their change to higher definition cameras taught me that these cameras do not just provide vision, they augment it.

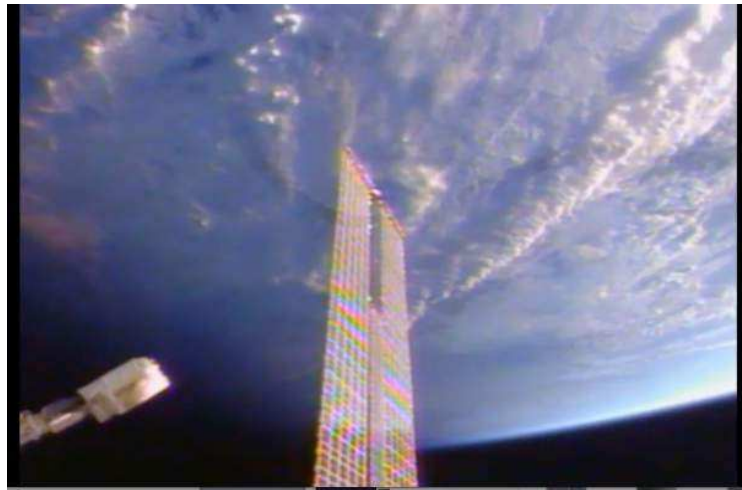


Figure 3: Jessica Dorloff, *ISS captured footage*, 2014, digital colour video



Figure 4: Jessica Dorloff, *HDEV captured footage*, 2014, digital colour video

Further into the project I continued to use the web cameras, exploring how they allow us to go beyond our normal capabilities by giving us access to views and spaces that would normally stay out of our reach. The vision of the Earth from orbit goes beyond my own human scale, allowing me to experience a space in a way I couldn't have normally. In this way the camera has created a new interaction, allowing me to uncover new types of vision. At this point I explored the expansion of visual experience through the work of Pierre Derks.



In his project *Streaming Reality* (2013), and its extension *Re-streaming Reality #1* (2016) Dutch artist Pierre Derks uses footage found and recorded from IP cameras that he has hacked over the internet. These cameras give Derks covert access to scenes from public as well as private spaces. His work with IP cameras reflects that ‘...in the age of global communication, a room, or even a city, is not a unified location’(Crocker 2007, p. 54) This led me to question if space could still be exclusively physical or if there are now only hybrid spaces made of both real and virtual material. Even in a private space there is a constant linking to virtual spaces, which in turn are connected to other physical spaces.



Figure 5: Pierre Derks, *Re-Streaming Reality #1*, 2016, installation view

I became interested in the linking together of separate spaces, using webcam videos I had recorded in combination with footage from cinema to explore the convergent nature of digital media. As I brought the two videos together into a shared space, I was simultaneously merging two spaces as well as two separate times, forcing them into a dialogue with each other (figure 6). This *Time Leap* series played with the fluidity of digital space and time, investigating new potential interactions between spaces and times, allowing for non-linear exchanges to take place.

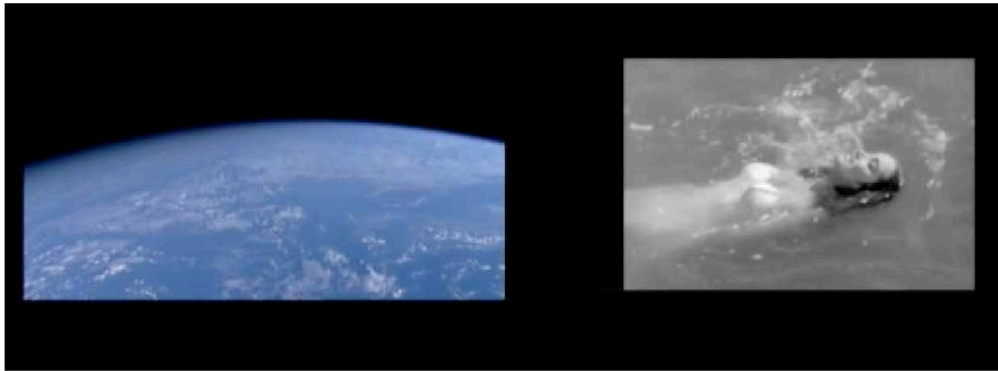


Figure 6: Jessica Dorloff, *Time Leap #1*, 2014, digital colour video

I then went on to explore the potential for web cameras to act as tools for witnessing and recording events. I began recording the Bardarbunga volcano in Iceland using webcams on the *Live From Iceland* website (<http://www.livefromiceland.is>). On the first day I captured a moody yet placid view of the location, not knowing then that this happened to be the last day before the volcano was to erupt. The second day I accessed *Live From Iceland's* Bardarbunga camera the landscape had come alive, and I recorded vision of lava and ash spilling over the mountain during the following days.



Figure 7: Jessica Dorloff, *Bardarbunga Timeline*, 2014, digital colour videos

The recordings I took became a timeline for an event that had unfolded live over several days, the creation of which was made possible by the link created between my lounge room and Bardarbunga by the web camera and my computer (see Figure 7). Through the web cameras I was able to witness and record a space as it changed over time, prompting me to use internet video to excavate spaces and events of the past.

Moving away from the web cameras to other online video platforms I shifted from live video and started to engage more with prerecorded footage. Encountering images of events that had already happened, or footage of spaces from past times I found no sense of a simultaneous connection between two locations but instead a reconnection between a past space and the present one.

There is no rewind button on the BETAMAX of life. An important event takes place only once. (Paik 2009, p233)

Nam June Paik's statement summarises key differences between lived, real world experiences and recordings of them. Video behaves differently to physical space; it can be paused, rewound, re-watched. Once recorded a particular space and time can be uncovered and viewed constantly.



Figure 8: Alex Zuniga, *The Missing Tape II Foreshadowing 9/11 Twin Tower Attacks Raw Footage World Trade Center*, 2015, viewed 10 March 2015  
<[https://www.youtube.com/watch?v=\\_0Ai5TUEzyo](https://www.youtube.com/watch?v=_0Ai5TUEzyo)>

Position is a fluid notion. An event's position in the past can be changed; once made to interact anew with media or concepts situated in the present its position shifts to the now. During this project I excavated the events of 9/11, beginning by collecting footage of the city before, during and after the terrorist attacks. As I watched each successive video of the World Trade Center shift from tourist memento (Figure 8), to documentation of disaster, and finally to

visual memorial, I realised that although the real event existed as a fixed point in the past (September 11 2001), through the online video archive I could experience the event repeatedly in the present (Figure 9).



Figure 9: Aurora Hazel, *9-11 – Second Plane Hits WTC*, viewed 9 March 2015, <<https://www.youtube.com/watch?v=zMseIGe-YvE>>

Similar concepts toward the relationship between video and the past can be found in Erkki Huhtamo's archaeological philosophy toward history and media, a theory where history '... belongs to the present as much as it belongs to the past...' Because it continues to be interacted with it has the ability to act as '...a mediator and a meaning processor between the present and the past...' (Huhtamo 1995) These central concepts then became part of my production method which I used to shape media images into dialogues between different points in time. Huhtamo's statement that '...new media history defines itself as a conversational discipline' (Huhtamo 1995) was given credence when I was able to use the video medium and its online platforms to create convergence points between my position in the present and a space of the past, giving me the opportunity to interact with the traces of a location. I further explored media archaeology as I continued to focus on uncovering events from before and after the World Trade Center was destroyed.

Stephen Vitiello's sound work *World Trade Center Recordings* is another trace of the buildings, consisting of recordings the artist made during a residency on the 91<sup>st</sup> floor of World Trade Centre Tower One in 1999. Taping a set of microphones to the tower windows, Vitiello captured the building and its surrounding environment in audio. Although it is not what Vitiello originally intended, his work has now been positioned as a before to the events of September 11 2001, serving as an audible trace of a physical location that would soon disappear (Figure 10)



Figure 10: Stephen Vitiello, *World Trade Centre Recordings: Winds After Hurricane Floyd*, 1999, mixed media sound installation

Eventually I had collected video from YouTube of New York City from before, during, and after the 11 September attacks. I took this footage and arranged it into a visual timeline with each period being placed in a layer in the city's history. By editing the videos together in this way I was able to converge different points of the city's history into a single present moment. By creating this convergent space I was interacting '...in a much more complex realm of past-present and present-past, in which layers of time overlap and associate with each other.' (Huhtamo 1995) In *New York City Timeline (2015)* video

came to represent both space and time, and I was able to use them to interact and exchange with both in a visual dialogue (Figure 11).

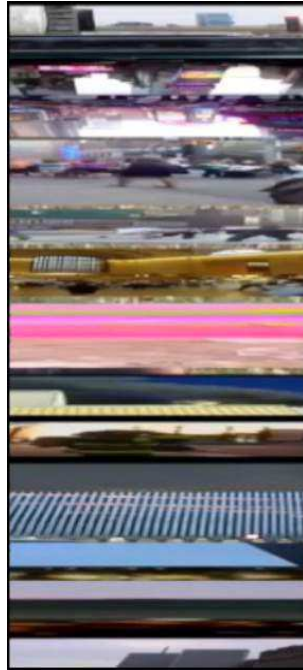


Figure 11: Jessica Dorloff, *New York City Timeline*, 2015, digital colour video, sound, variable dimensions

On 11 September 1977 New York City became a point of convergence during a different kind of event. Franklin Street Arts Center, Center for New Art Activities and ArtCom/La Mamelle collaborated with NASA and PISA (Public Interest Satellite Association) to create a live video link between New York and San Francisco. During the event live discussions and performances were beamed in real time from each location, with some of the performances being mixed into a single video screen (Figure 12).

The *Send/Receive Satellite Network* was a live event, not a prerecording, so it contrasted my exploration of the 9/11 terrorist attacks. The communication that took place during *Send/Receive* was very direct, with interactions happening in the present moment.



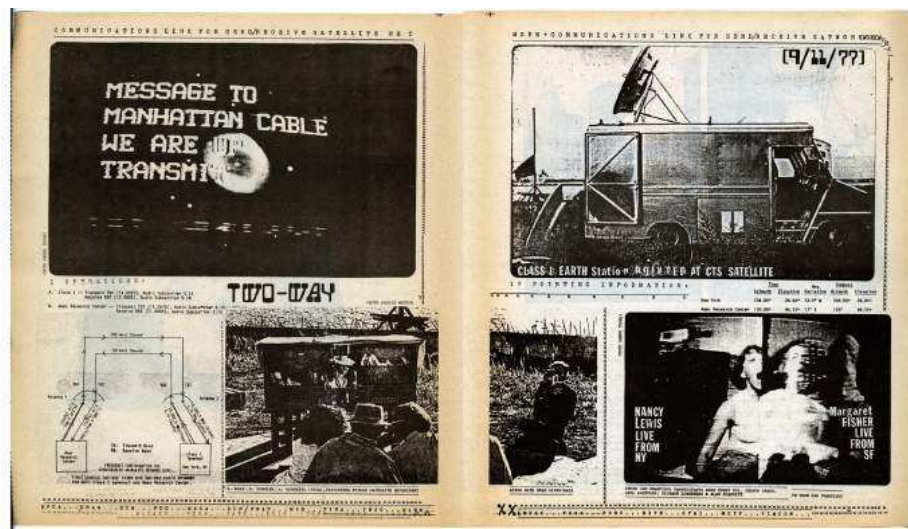


Figure 12: Liza Beard, *Send/Receive Satellite Network* booklet, 2009, sourced 11 December 2016, <[sendreceivesatellitenetwork.blogspot.com.au](http://sendreceivesatellitenetwork.blogspot.com.au)>



Figure 13: Nancy Lewis performing in NY, Margaret Fisher performing in San Francisco, mixed live onto a single screen during *Send/Receive Satellite Network*, 1977

In one instance Nancy Lewis and Margaret Fisher were performing simultaneously in New York and San Francisco while the satellite images of their respective performances were merged into one on TV screens in both locations (Figure 13). The mixing of the fluid two-way satellite images with the convergent space of the TV monitors created a moment of exchange between spaces and people that were physically distant from each other.

In *Art and Satellite*, Nam June Paik discusses the satellite's capacity to change methods of communication between separate people, spaces and times:

The meeting of person and person, of person and specific era are often said to take place 'one meeting-one life,' but the *bundle of segments* of this existence... has grown much thicker because of the satellite(Paik2009, p. 233).

Much like the Internet videos used in this project the technologies used in *Send/Receive Satellite Network* provides pathways for the connection of people and places, allowing them to interact with each other in '... a multitemporal, multispatial symphony' (Paik 2009, p. 233).With the invention of satellite technologies and their connection to household screens notions of space and time, communication and exchange where already becoming fluid. In this project I have investigated how internet devices, just like the satellite, are '...able to make everyday a sight-seeing trip' (Paik 2009, p. 234) by allowing the user to travel, disembodied, around the globe, forming new connections and exchanges with the spaces to which technologies allow them to be connected. In the *Send/Receive Satellite Network* I found technology being used as a tool to create communication between separate groups of people within the virtual space of the screen. Whereas my use of livestreams and recorded footage gave me a sense of how space can be explored, converged, and interacted with through vision I felt that I needed to explore a more involved level of human interaction within virtual spaces.



## CHAPTER 2: Reflection and Interaction

*'A technology is interactive to the degree that it reflects the consequences of our actions or decisions back to us. It follows that an interactive technology is a medium through which we communicate with ourselves – a mirror.'*

(Rokeby 1996)

As my research moved away from vision-based discovery I explored the screen as a more expressive and immersive space. This signals a shift away from visual modes of interaction toward more involving forms. Peter Weibel describes a similar experience of the screen when 'The convention of a window onto a small part of a fixed event is becoming one of a door leading into a world... that the observer is free to enter and leave at will' (Weibel 2009p. 227). This shift also occurred in the project as I began to explore screen technologies as portals that allowed access to spaces and people I could not only view, but also communicate with and influence. I moved beyond visual navigation, experimenting with more dimensions of media-based communication and examining the ability of video-technologies to capture and reflect our own actions, thoughts and emotions back toward us as well as to others.

Using screen technologies to record my own behaviour and that of others I uncovered more of its reflective abilities. I found it useful at this point to define the screen in terms of Michel Foucault's idea of the space within a mirror as '...a placeless place.' (Foucault 1997, p.3) This description of mirror space introduced by Foucault in *Of Other Spaces: Utopias and Heterotopias* suggests similarities with screen space, which has no physical location beyond the machine but reflects our own spaces back at us. This notion of the screen as mirror allowed me to consider new forms of interaction in which I became an active participant in screen space as I '...see myself there where I am not, in an unreal virtual space that opens up beyond the surface.' (Foucault 1997, p. 4) While Foucault's discussion of the mirror as a virtual space was a useful starting point, as I started to examine online videos I found the screen more often reflected back other spaces and people.

A reaction video is a recording of a viewer's face as they watch another video, usually the preview of a much anticipated movie or a shocking scene from a TV program like HBO's *Game of Thrones* (2011). In these videos the users point the camera at themselves, capturing their own behaviour as they react spontaneously to the visual subject. The video is then uploaded to an internet video platform, most frequently YouTube, as with the *Deadpool* reaction video (Figure 14). As I watched the video I was conscious of three different spaces alternating: first I was aware of my own physical location, secondly the position of the user visible in the video, and finally the virtual space of the cinema footage which was superimposed into the video frame.



Figure 14: Flick Freaks, *Deadpool I Red Band Trailer [HD] (Reaction and Review)*, 2015, online video, viewed 10 August 2015, <<https://www.youtube.com/watch?v=ZMGjESJ6toA>>

Reflecting what Stephen Crocker titles 'The "multiple" nature of media environments', I found the ability of the reaction video to present multiple spatial and temporal positions at once could generate an experience in which 'We find ourselves physically present in one situation and at the same time involved in several others...' (Crocker 2007, p. 71) By placing separate video spaces together in one frame, the reaction video created a new hybrid space in which an exchange could take place first between the user and cinema

footage and then between myself and both video spaces at once. In contrast to the earlier web camera experiments watching the reaction video felt like a more involving exchange because I had encountered another person within the virtual space.

The use of technology to place the viewer into a virtual space predates the prevalence of digital media. In 1969 Les Levine built a visual interface out of nine television monitors and video cameras (Figure 15). When viewers stood in front of the display they saw both real-time and time-delayed footage of their own forms screened back at them through the monitors.



Figure 15: Les Levine, *Contact: A Cybernetic Sculpture*, 1969, 9 monitors, video cameras

Levine's work places the image of the viewer into a virtual, televisual space in which 'Bodies are transformed into a series of disembodied, dematerialized bodies of electronic information...' and the viewer becomes '...a body outside itself that executes its own being from a third person perspective' (Shanken2009, p. 103). During this process the physical and visual spaces of the work converge with each other, allowing the viewer to shift between the two and exchange with both. As explained by Levine, '*Contact* is a system that synthesizes man with his technology... the people are the software' (Youngblood1970, p. 340). Before portable computers and the internet where

widely available to the public Les Levine was uncovering methods that made a viewer inhabit a virtual space, becoming a part of the screen environment.

Another closed-circuit video work contemporary with Levine's *Contact* was the installation *Wipe Cycle*, created by Frank Gillette and Ira Schneider in 1968. Having many visual similarities with Levine's work, *Wipe Cycle* used nine television monitors and video cameras to place viewers into a virtual space. Unlike *Contact*, however, *Wipe Cycle* also featured footage from commercial television and pre-recorded video of other people. These images appeared alternately with live video of the viewers on the same screen, creating a new type of exchange as the viewer became part of media content. As quoted by Edward Shanken in *Art and Electronic Media*, Schneider noted that 'The most important function... was to integrate the audience into the information' (Shanken 2009, p.30) After this combination has taken place '...you're as much a piece of information as tomorrow morning's headlines...' (Shanken 2009, p. 30) As with online video content today, the close-circuit video works of Levine, Gillette and Schneider in the 1960s made members of the public more active in the production and broadcasting of media content by giving them the chance to see themselves reflected within it. As Shanken himself has noted:

At the time, these installations offered the public an unprecedented opportunity to see itself as the content of television, to become integrated into the electronic environment of mass media; in other words to establish a unity between subject and object, viewer and viewed' (Shanken 2009, Shanken 2009, p. . 31).

Through unearthing these early TV experiments I began to understand that screens and cameras allowed integration to become a mode of exchange between viewers and video content. This was an important step for the project as I then went on to experiment with new video compositions involving Internet-based media and viewer content.

In one experiment with reaction video footage I chose to disrupt the relationship between the filmed viewer and the media content with which they were interacting. To do this I removed the viewers from their original context and placed them into new video content. In one example of this I placed viewers from several different reaction videos into pre-recorded footage of Queen's *Live Aid* performance, which took place at Wembley Stadium in London on 13 July 1985 (Figure 16). This was intended as an interruption of the original dialogue between the user and footage, creating a new interplay between images that had once been two separate spaces recorded at different points in time.



Figure 16: Jessica Dorloff, *Reaction Videos Reacting to Queen*, 2015, colour digital video, sound

Taking advantage of '...the ease with which information and sensations may be cut out of one location and pasted into another' (Crocker 2007, p. 52), I explored video space as a malleable material, capable of being formed into new meanings and relationships at different moments in their respective chronologies.

New York based Australian collaboration Soda\_Jerk mixes sampled video footage from countless sources into unified, convergent video spaces, forming new narratives that explore themes of time, archive, and the fluidity of media

content. In *The Was* (2016) Soda\_Jerk collaborated with music group The Avalanches to create a video space inhabited by figures brought together from multiple cinema and music video pieces.



Figure 17: Soda\_Jerk vs. The Avalanches, *The Was*, 2016, digital colour video

Whether they seem to be dancing together, walking side by side, or looking at each other Soda\_Jerk have edited the figures in such a way that throughout the artwork elements from separate videos appear to interact with and react to each other, as the moments of convergence between them unfold. (Figure 17) Seeing the reworking of so many fragments into a new experience confirms video is as a fluid space that continues to be expressive after it has been recorded. As Haidee Wasson puts it:

...a movie is never just a film. The film industry is thoroughly integrated around this basic fact, as are the millions of people who watch, play, rewind, pause, download, listen to, collect, and otherwise interact with cinema' (Wasson 2007, p. 75).

In Soda\_Jerk's practice they use digital technologies to create virtual spaces where figures can communicate despite their original separation in space and time. During this process, 'Archival history is folded into new constellations, producing virtual proximities between disparate temporal moments'

(Soda\_Jerk n.d.). The themes of virtual proximity and transportation were here traced back to the earlier work of Paul Sermon.

In Paul Sermon's installations *Telematic Dreaming* (1992) and *Telematic Vision* (1993), the artist transforms physical bodies into the immaterial form of light so that they can be virtually transported between spaces. In both works participants were positioned in separate rooms, either lying on a bed or sitting on a sofa.



Figure 18: Paul Sermon, *Telematic Dreaming*, 1992, 2 beds, video cameras, projectors, ISDN network

Through a network of video cameras, projectors and TV monitors, each participant saw the other one projected into the space next to them, where they could interact with each other through gesture as though they were physically in the same space. I saw Sermon's work as a materialisation of Jacques Derrida's declaration that '...we will indeed have to remove the concept of virtuality from the couple that opposes it to actuality, to effectivity, or to reality...' (Derrida 1995, p. 66) Due to the influence of video technologies on our experience of space the borders between virtual and physical realms seem to have been worn down (Figure 18).

Whereas Soda\_Jerk used digital editing techniques to cause virtual figures to interact, Sermon created exchanges between sets of physical people by

translating them into virtual forms. Through this work I found that older forms of video technology such as TV monitors and projectors allowed for greater interaction between physical and virtual spaces, as their ability to influence both simultaneously brought us closer to hybrid spatial and temporal environments.

I took these concepts with me as I held a significant exhibition of my visual research at Sawtooth ARI Gallery, Launceston in September 2015. Titled *The Switch Trial* the exhibition used digital videos displayed on nine old TV monitors to bring the experience of internet video sharing into a physical gallery space. The suite of nine videos in the room each represented an interpretation of a different type of video commonly found on YouTube. As well as *Reaction Videos Reacting to Queen* (Figure 19), the show featured literal and metaphorical reflections on the visual and textual interactions users could have with video online.

One example of this was an exploration of the YouTube comments section, examining the relationship between internet video and viewer conversation. Titled *Sub-Atomic Culture: The Things People Say*, the video was a collection of historical documentations of atomic bomb tests carried out in America during and just after World War II. This visual portion of the work explored the capacity of internet media to act as an archive, giving me access to visual histories and timelines. While the images could be placed into a rough chronology as I did with the videos in *New York City Timeline* (Figure 11), when viewer comments are taken into account the idea of a linear arrangement became more complicated.

The comments section used by viewers on YouTube is not of the past, it is a constantly growing mass of feedback and dialogue. Here each comment once left does not become an idle piece of information but instead has continuous interplay with the visual and textual information around it. To mirror this discourse in the gallery space I edited viewer comments (Figure 19) into the frame of my video, attempting to create a hybrid experience of both virtual and physical video interactions (Figure 20). This process was also seen as an



exchange between myself and the video content, as I mediated a dialogue between 70 –year -old footage and contemporary textual statements.



Figure 19: Jessica Dorloff, *YouTube Comment 1*, 2015, digital screen capture



Figure 20: Jessica Dorloff, *Sub-Atomic Culture: The Things People Say*, 2015, digital colour video

The exhibition also featured the footage of locations I had collected from web cameras edited into a slideshow titled *Views From My Lounge Room*, as well as parody of cat videos in which footage from the Andrew Lloyd Webber musical *Cats* was utilised and an interpretation of the ‘rick rolling’ phenomenon in which Rick Astley’s music video *Never Gonna Give You Up* was played in intermittent bursts from a single monitor. Together with the monitors on which they were displayed, these videos were used to create a physical video environment that used online video archetypes to create a space that was both virtual and tangible.



Figure 21: Jessica Dorloff, *The Switch Trial*, 2015, installation image, Sawtooth Ari Gallery, Launceston

Using similar techniques, Jon Kessler transformed a gallery into a physical news space exploring the war on terror (Figure 22). His 2005-6 installation of *The Palace at 4 A.M.* at P.S.1 Contemporary Art Center in New York was a multimedia extravaganza of video and televisual technology used to immerse the viewer into a highly politicised visual environment. Analogue TV monitors, surveillance video cameras where used to capture and display real time images of the viewers, which were then mixed with footage from a variety of media sources. This construction of technologies and images resulted in a constant interplay between the viewer, machines, and imagery in the space, as visitors to the gallery saw themselves within Kettler's work at the same time as moving around the outside of it. While his work did lead me to consider how technology can be used to construct environments, my exhibition had a greater focus on bringing the online video experience to a physical space.



Figure 22: Jon Kessler, 2005–6, *The Palace at 4 A.M.*, installation view P.S.1. Contemporary Art Center, New York

One of the major differences between watching video online and watching cinema and TV is the viewer controls that are a feature of online videos. These are the buttons that allow users to adjust their viewing experience, including pause and play, window size, and video definition. The most significant of these controls for the exhibition, and the project itself, were the ‘thumbs up’ and ‘thumbs down’ buttons featured on YouTube videos that viewers used to share positive and negative opinions about the video content. In order to bring this mode of interaction to the gallery space I created a voting system in which visitors would use paper tokens to indicate their feelings about individual videos (Figure 23).

By giving visitors to the gallery the ability to show their response to the videos, I gave them the capacity to influence the display in the space. The audience where aware that the least popular videos would be switched off, meaning their votes determined the content of the exhibition. As each video was turned off, the dynamic in the room changed, altering the atmosphere in the gallery and further confirming the influence that virtual media and screen technologies can have on the spaces they occupy.

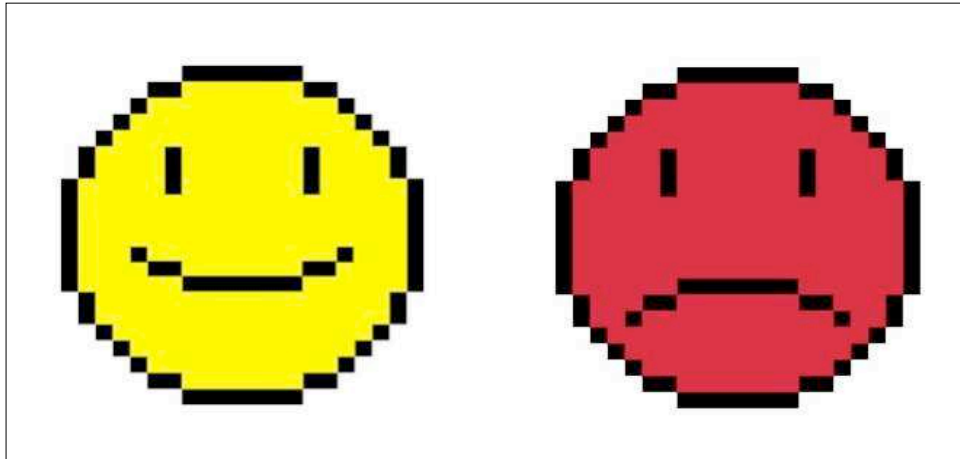


Figure 23: Jessica Dorloff, *Like* (Left) and *Dislike* (Right), 2015, paper tokens, dimensions variable

The Sawtooth exhibition strengthened my focus on bringing virtual and physical content together in moments of convergence and interplay. The progression of visual work in this stage of the project shifted my research further towards investigations of the physical elements of interaction. After using the analogue television monitors in the sawtooth show I gained a new consideration for the material qualities of screen technologies and media content. Moving forward into the next round of experiments this meant I centred my research on corporeal interactions with screens.

### CHAPTER 3: Tangibility and Materiality

*'The vast majority of screens we encounter do not disappear with the images that flutter across them. They endure through time. Sitting on desks, mounted on walls, encased by metal, glass, and plastic, they have a comparative stability.'*

(Wasson 2007, p. 76)

Taking up Haidee Wasson's focus on the screen object, I began to explore the materiality and potential physicality of screen technologies and media. I came to view screens not just as '...the window displays for convergence, where we see the melding of film, broadcasting, and computers into hybrid media...' (Acland 2012, p. 171), but also as a corporeal presence capable of influencing the spaces they occupy. In 'The crack in the electric window', Charles Acland attempts to identify what is meant by screens, investigating their varied material qualities:

Mobile and monumental, miniature and massive, screens are not exactly everywhere, but they offer up – they make *visible* – notions of ubiquity, adaptability, and utility. They are a stabilized part of how we expect to meet the future. Screens are our plastic (Acland 2012, p. 171)

His description of screens as a collection of forms, with the '...ability to be shaped and reshaped into so many things, in so many places...' (Acland 2012, p. 171), helped me to consider screens not as one fixed entity, but as a category that could be applied to a variety of pliable objects and materials. However Acland's suggestion that the screen '...is not in and of itself a medium, format, or platform...' but is instead '...an in-between manifestation of all three' (Acland 2012, p. 168) was countered through an archaeological excavation of the screen as an expressive object in itself, going beyond Acland's description of an object that:

...materializes how we come to see and describe the differences and connections among television, film, computers, electronic signage, and digital spaces (Acland 2012, p. 168).

To uncover the screen as a material that contributes to the making of meaning during exchanges between people and media I began with the archaeological work of Erkki Huhtamo. In 'Screen tests: why do we need an archaeology of the screen?' (2012), Huhtamo notes the difficulty of focussing on the screen as a medium:

As they become part of the practices of everyday life, screens have a tendency to become invisible; they mediate perceptions and interactions, effacing their own identities in the process (Huhtamo 2012, p. 145).

Because 'We don't stare at the screen; we gaze at what it transmits' (Huhtamo 2012, p.), the screen itself can often be paradoxically overlooked in the process of interaction between viewer and media content. As Huhtamo continues:

...screens also hide the history of their own becoming, turning into a kind of ever-present nonpresence, an anomalous object (Huhtamo 2012, p. 145).

One of the aims of this project was to unearth the material history of the physical screen in order to take advantage of its potential as a spatial and temporal mediator, avoiding the appearance of inactivity that Huhtamo describes.

Beginning in the early 1960s, Wolf Vostell's experiments and 'happenings' where often presentations of mediated spaces constructed from television

units in combination with pieces of furniture and carefully selected objects. The first of these installations was *Television Décollage*, a multimedia event held in New York in May 1963.



Figure 24: Wolf Vostell, *Television Décollage*, 1963, monitors, filing cabinets, furniture, groceries, dimensions variable.

Together with six monitors displaying a variety of programs, the room featured melting plastic toys, and packets of groceries glued to each monitor (Figure 24). In Vostell's concept paper for the work, he describes an environment that prompts audience participation:

Pots with plastic toy airplanes melting due to heat. 6 grilled chickens on a canvas / Audience has to eat them off the picture. 6 chicken incubators / on canvas / the chickens to hatch on day of exhibition. Everyone receives an ampoule of liquid they can use to smear the magazines. Everything happens at once (MediaKunstNetz 2012).

In Vostell's work the screens formed part of a wider material environment in which synthetic, organic and electronic materials were all used in combination to create a visually and physically interactive space. Vostell's screens formed part of the aesthetic language of the space, and by grouping them together with other objects and furniture he avoided the possibility of them becoming invisible.

In another work exploring the relationship between screen, video and the environment, Mary Lucier's *Dawn Burn* (1973) presents seven monitors arranged so that they decrease in size from right to left.

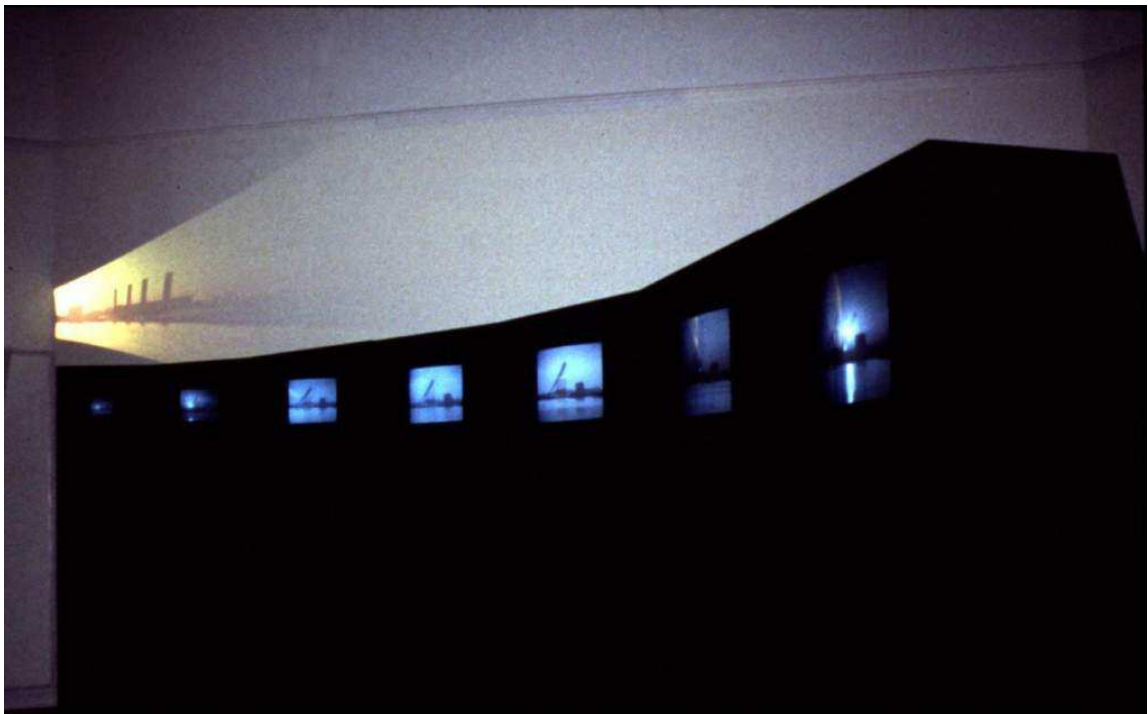


Figure 25: Mary Lucier, 1973, *Dawn Burn*, seven channel video, slide projector, seven monitors, seven laser discs, plywood, paint, 35mm slide

On each monitor is a recording Lucier made of the sun rising over the East River in New York. As the light of the sun hit each of the tapes being used to document the event, it started to burn holes in the picture. The burning process became more intense the longer each videotape was exposed, '...resulting in a gestural stroke similar to what an artist might make with a pencil, brush, or other conventional media' (Shanken 2009, p. 71). Lucier used the monitors to amplify the meaning of the videos, with their



arrangement in the gallery in a line with an ascending/descending order reflecting the timeline of the events and their influence on the media (Figure 25). In *Dawn Burn* my reading of the video's visual space is directly influenced by physical elements of the natural world. This exchange is made possible by the specific materiality of the videotapes, which are vulnerable to reacting with heat and light, resulting in the mark making. As I moved forward with the project my research was influenced by the interplays between visual media, technology and physical manipulations that I found in Lucier's work.

My earliest experiments with these themes began within digital spaces. I began by collecting digital copies of painted landscapes found through Google Images' search engine. For me these images represented hybrid spaces, having originated as hand-crafted images made from physical materials including colour pigment, oil and canvas, which were then transformed into digital imagery held within a camera, and finally transported to the immaterial cyberspace network of the internet using a computer. These forms of digital information, given the name *Imographs* by new media theorist Ron Burnett, are images '...that can be transformed through the use of software within digital environments' (Burnett 2007, p. 130). Following this, computer technologies create '...the ability to introduce a high degree of elasticity into digital images' (Burnett 2007, p. 130). Where Lucier's *Dawn Burn* relied on a disembodied element (light) to interact with the virtual video space, using computer-based editing software allowed me to create a more direct translation of my physical gestures into the images with which I was interacting.

Understanding that 'Digital tools are changing the landscape of expression and creativity...' (Burnett 2007, p. 132), I conducted experiments that used Adobe Photoshop to alter the content of digitised painting images. Exploring the extent to which they '...encourage manipulation, transformation, and playfulness...' (Burnett 2007, p. 130), I chose editing tools that required only a single click of the mouse to transform the image content. In one example I used Photoshop's eye dropper tool to select a random pixel of colour from the image. Then, using the magic wand tool, I clicked a random area of the image

and the tool used the pixel information to transform the picture. An example is the painting by Thomas Cole (Figure 26) and the transformed image as shown in (Figure 297).



Figure 26: Thomas Cole, *Scene from The Last of the Mohicans, Cora Kneeling Before Taremund*, 1827, oil on canvas, 25 3/8 in. x 35 1/6 in., Wadsworth Atheneum Museum of Art, Connecticut, USA.



Figure 27: Jessica Dorloff, *Digital Painting Series*, 2014, colour digital prints, dimensions variable

While these tools allowed me to change the appearance of the images, the fact that the tools I used did not give me control over the placement of the marks made me question the extent of my role in this creative process. This tension between artistic production and computer generation was also explored by Adrian Ward.

In 1999 Ward created an open-source software program named *Autoshop*. The purpose of *Autoshop* was to subvert the outcomes normally expected from a visual editing program by randomising the process. As Ward explained, this was intended to prove that 'An automated program might use its representational strategies but it has no concept in itself (Shanken 2009, p. 94). The software does not create, it can only respond to the prompts enforced by the user.

My next experiments sought to find a digital editing method that would allow me to translate my gestures and actions into the images more directly, giving me greater control over the outcomes and forming an interaction between the images and my physical motions. Going back to Photoshop, I used the erase tool to trace lines into digital images I had collected online (Figure 28). While doing this I could see my actions altering the images in real time, helping me move further away from the sense that the computer was generating the changes.



Figure 28: Jessica Dorloff, *Digital Manipulation Series*, 2014, digital prints, dimensions variable

Instead, I felt that I had fashioned a more tangible dialogue with the images. Using erasure as a mode of manipulation also allowed me to fragment the images, breaking individual pieces out of their surrounding contexts. This made them easier to move into new situations that I used to build new convergent digital spaces (Figure 29).



Figure 29: Jessica Dorloff, *Digital Collage Series*, 2014, digital image

This series led me to further consider the exchanges that took place between digital spaces and myself when I used computers and their associated hardware. In order to explore this further I began to take note of my encounters with digital spaces, trying new ways of recording my actions.

I started by documenting which websites I was visiting and how often I visited them using a simple matrix. Each time I visited a website I would place a mark against it in the relevant area of the matrix. Eventually I was able to document my online habits over specific periods of time, as I did with a one week period in 2014.

One week of Internet usage:

	Mon	Tue	Wed	Thurs	Fri	Sat	Sun
Google	IIIIII	II	III	IIIII	II	III	III
Facebook	III	II	II	I	I	I	II
YouTube	II	III		I		III	I
News	III	IIII		II		I	III
EBay	IIII			II			

Figure 30: Jessica Dorloff, *One Week of Internet Usage*, 2014, digital screen capture

I was able to observe patterns in my behaviour, and also get a sense of how my encounters were building up over time (Figure 30). At this point I decided to experiment with ways of visualising these data.



Figure 31: Jessica Dorloff, *Colour Core Sample*, 2014, digital image

By taking colour samples of each website I visited, I was able to assign each encounter with a colour code. With this system I displayed the patterns of my

behaviour as a visible timeline, tracing and recording the moments of exchange between myself and online content (Figure 31). While I did view this as a form of mark making generated by my own actions, I felt these encounters lacked the tangible, physical interaction that Mary Lucier had created in *Dawn Burn*. My main focus for the project at this point was to attempt to discover a method of production that would allow me to translate virtual timelines into physical forms.

The continuity of cinema is based on the frame speed of 24 per second. At this speed persistence of vision causes us to see thousands of individual images as a single unified moving picture. To start the process of materialising the images I broke the movie down into its individual frames and then printed them onto paper. Each individual frame represented a single unit of physical cinema space, and every 24 units representing a second of physical cinema time.



Figure 32: Jessica Dorloff, *Cinema Time*, 2016, paper, glue, dimensions variable

Through this process of physicalisation, cinema space and time could have measurable qualities like shape, size and weight (Figure 32). However I felt that paper did not reflect the material qualities of the screen, so I then decided to translate these shapes into media containing natural minerals such as silica bronze and clay.



Figure 33: Jessica Dorloff, *Firebrick Negative*, 2016, carved firebrick, dimensions variable

Taking the dimensions of the paper forms, I carved them into firebrick moulds to be used for bronze casting (Figure 34). Once the forms emerged in bronze from the moulds I found they had greater physical presence than the paper versions, being heavier to hold and colder to the touch. The minerals found in silica bronze, such as iron, copper and zinc, could also be found in the components used to manufacture screen technologies such as televisions and computers. This relation led me to consider the deeper history of media time, as I viewed technology from ‘...the perspective of minerals sedimented for millions of years before being mined... for use in information technology facilities’ (Parikka 2012, p. 97–98) This view allows us to ‘...approach media cultures through the various materials, components, long networks and genealogies in which media technologies are being produced’ (Parikka 2012, p. 97). For this project the approach of acknowledging the longer history of electronic materials allowed me to consider their inseparable connection to natural spaces, with mining pondered as a form of mark making in the earth. As media archaeologist Jussi Parikka has pointed out:

Media history is one big story of experimenting with different materials from glass plates to chemicals, from selenium to coltan, from dilute sulphuric acid to



shellac and guttapercha, to processes such as crystallization, ionization, and so forth (Parikka 2012, p. 97).

This is significant for this project not only as a media theory, but also as a framework for the production of creative work that focuses on experimentation with materials to uncover new interactions between us, screens and media.

After the bronze pieces were created I found their solidity was an interesting counterpoint to the usual fluidity of cinema space, creating a tension between the motion of cinema, the stasis of metal, and the in-between state of screen technologies. However their firmness also limited their potential as expressive objects, and so I moved to the more impressionable and mass-producible material of clay (Figure 34).



Figure 34: Jessica Dorloff, *Clay Time*, 2016, earthenware clay, dimensions variables

The clay allowed me to maintain the connection with screen materiality, as many of the same minerals can be found in earthenware clay and glazes as well. But the clay was also more malleable, giving me greater options when it



came to using it to record information. One example of this was time-stamping the clay with the information from the individual cinema frames on which they were based, to make them more identifiable as pieces of media. Another method I used was to colour code the objects using glazes, which gave me a system I could use to order the objects into specific sequences and chronologies, much like I did with the *Colour Core Sample* series of images (Figure 31).

Throughout the entire project timelines became a central theme present in the methods of collection, ordering, manipulation, and archaeology that I used to research the constant correspondences between physical and visual spaces that surround us every day, and have done so for decades.

## CONCLUSION

*'Changes in the availability, usability and distribution of technology is vastly altering the way in which we interact with the world around us and with each other.'*

(O'Neill, 2008)

In this project I set out to explore a constantly shifting relationship between technologies and our surrounding environment, expanding my awareness of the different levels of immediacy that are experienced through the filter of the screen. Having considered the visual exchanges that give access to the world through the window of the screen, a physical object that can transport the viewer into virtual worlds, I am not able to concretely define these intricate relationships.

At this point I pause to once again consider the laptop resting on my knees. It has a tiny 'motion eye' camera just above the screen, capable of becoming a portal through which spaces and events can be observed in real time, or recorded and shared to be relived again and again. It is capable of forming a visual link from my physical location, through virtual spaces, and out into another tangible space. As other video camera networks have been in the past, the web camera turns the laptop into a tool for witnessing and making contact.

I take a moment to think about the potential of the keyboard and track pad to translate thoughts, action, behaviour, and gesture into the virtual space of the screen, which visually reflects them back into physical space. They are tools for conversation and exchange, allowing me to navigate virtual spaces, encountering other people along the way.

And finally I contemplate the material of the machine itself: an amalgamation of copper, zinc, iron, silicon, glass, plastic and more. The construction of screen technologies from minerals binds virtual images to the physicality of substances sourced from the earth, the connection is inseparable.

Outcomes for this project included gaining a wider understanding of the sets of relations between spaces and that those spaces exist simultaneously; machines are in both virtual and tangible spaces, they are at once stationary objects and active mediators, they are ancient materials newly formed. The laptop, and this project, are tools that allow me to shift among modes of interaction, fluctuating between visual, physical, and virtual experiences of space.

The media environment is constantly evolving; because it is a dynamic and active subject it defies strict definition, yet I've found that examples of technologies, networks, and art practices from the past can be used to identify components that make up the media environment of today. Once found each of these pieces helped to build a clearer picture of the origins and evolution of points of contact between virtual and physical spaces. This has increased my knowledge of screen technologies as mediators of the spaces we inhabit because I am now aware that specific modes of interaction and exploration have complex histories that go beyond their digital manifestations. Future explorations will focus on further broadening this understanding through visual explorations into the Super Media World that continue to explore the present through historically oriented vision.

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